

Adolescent Sexuality Related Beliefs and Differences by Sexual Experience Status

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Abstract

Purpose: To examine if attitudes toward premarital sex, beliefs about peer influence, and family communication about sexual relationships differ by sexual experience status. Methods: Data were collected from a randomly selected ethnically diverse youth sample ($N = 1,318$) residing in two Midwestern cities. The primary method used in data analysis was logistic regression. Results: More sexually experienced youth believed that many of their friends were already sexually active, and reported talking with their parents about STD prevention than sexually inexperienced youth. However, more sexually inexperienced youth reported cautious premarital attitudes than did experienced youth. Conclusion: Attitudes and beliefs regarding adolescent sexual activity differ based on sexual experience status. Implications for health promotion practice are being discussed.

Despite a significant decline in the overall U.S. teenage pregnancy rate from 117 pregnancies per 1000 in 1991 to 84 in 2002 for teens aged 15-19, the U.S. teen pregnancy rate still remains higher than rates in other industrialized countries (Henshaw, 2001; Singh & Darroch, 2000). According to the Youth Risk Behavior Survey (YRBS), 46.8 % of U.S students attending 9th-12th grades have had sexual intercourse during

their lifetime (Centers for Disease Control and Prevention, 2006). Moreover, approximately one third (35.3 %) of students nationwide had sexual intercourse within the three months preceding the survey (i.e. they are currently sexually active). There are approximately four million new cases of sexually transmitted diseases (STDs) in adolescents each year, with AIDS being the seventh leading cause of death for 15-24 year olds (Centers for Disease Control and Prevention, 2004).

In our efforts to combat the problems of pregnancy and STDs among youth, one conceptual framework that has been used to guide the development of relevant programs is that of antecedents (Kirby, 2001a). There are more than 100 antecedents related to adolescent sexual behavior, poor contraceptive use, pregnancy and childbearing. These are grouped into five major clusters: a) family (e.g. parental-child communication on sex and contraception); b) community (e.g. high unemployment rate); c) peers (e.g. peers attitudes toward use of condoms); d) partner (e.g. partner attitudes toward contraception); and e) individual (i.e. sexual beliefs, attitudes and skills). It is worth noting that although antecedents are correlated with the behavior and must occur prior to it, they are not always *causally* affecting that behavior. Kirby also suggests in the same review that practitioners focus on the most important antecedents, those factors that are known to affect sexual risk behaviors. This study focused on three important (as defined by Kirby) antecedents: attitudes toward premarital sex, perception of peers' sexual activity status, and parent-child communication about sexual issues. In particular, it examined how youth's beliefs about premarital sex, peer influence, and family communication may vary based on the youth's sexual experience status.

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Past research has shown that attitude toward premarital sex has a strong and consistent association with sexual activity. In other words, youth with more conservative attitudes are less likely to have sex, and are likely to have sex less frequently than are those with more permissive attitudes (Ku, Sonenstein, Lindberg, Bradner, Boggess, & Pleck, 1998). However, more recent studies have provided mixed results. One study (Nahom, et al., 2001) found that sexually experienced teens had higher intentions to have sex in the next year when compared to non-sexually experienced teens. A second study (Leigh, Morrison, Trocki, & Temple, 1994) found that more than 50% of sexually experienced teens expected to have sex in the next year, even though only 25% of them expressed the intention to do that. This mismatch of intention and expectation was not found among the virgins. A third study (Martin, Specter, Martin, & Martin, 2003) found

that although 51 % of the adolescents indicated they have engaged in sexual intercourse only 36% of the participants held favorable attitudes toward premarital sex. A final study (Flanigan, Huffman, & Smith, 2005) found that virgins are more likely than those who are sexually experienced to disapprove of sexual activity among teens.

Beliefs regarding peer sexual behavior also differ by sexual experience status. One study has shown that sexually experienced teens felt significantly more pressure and had a greater intention to engage in sexual intercourse than did virgins. According to the same study, sexually experienced teens perceived significantly more of their friends to have engaged in sexual intercourse than did virgins (Nahom et al., 2001).

Another important antecedent of adolescent sexual behavior is that of parent-child communication. Adolescents have expressed the desire for their parents to be the primary sexuality educators (National Campaign to Prevent Teen Pregnancy, 2003). Despite these preferences, youth report receiving minimal sexuality education from their parents (Kaiser Family Foundation, 2000). According to a recent national study (Suellentrop, 2006) virgin teens (aged 15-19) are more likely to have talked with a parent about how to say no to sex. On the other hand, sexually experienced teens are more likely to report that they have talked to a parent about the methods of birth control, where to get birth control and about STDs compared to virgin teens.

This study is significant because it addresses some of the research gaps identified in the cited literature. For instance, it is unclear whether sexually experienced youth hold more favorable attitudes toward premarital sex than virgins. In addition, only one study (Nahom et al., 2001), which employed a convenience sample, revealed that more sexually experienced youth than virgins were likely to believe that their peers are sexually experienced. Finally, there is limited information whether parental discussion about sexuality might differ between sexually experienced youth and virgins.

Based on the previous discussed evidence the main hypotheses tested in this study are: 1) More sexually inexperienced youth than experienced youth will likely have cautious attitudes toward premarital sex; 2) More sexually experienced youth than non-experienced youth will likely believe that their peers are sexually active; and 3) There are differences in the percentage of youth who communicate with their parents about sexual matters based on the status of the youth's sexual experience and the content of the discussion.

Methods

The data analyzed in the present study are from a larger study examining the relationships among youth assets and engagement in youth risk behaviors such as sexual activity, violence and drug use. Detailed methods for this study have

been reported elsewhere (Oman et al., 2002) and will be summarized here.

Data were collected from 1,350 randomly selected households in inner-city areas of two Midwestern cities with populations of approximately 500,000 and 400,000. This study was approved by the Institutional Review Board for the use of human subjects at the University of Oklahoma Health Sciences Center. One parent and one adolescent (13-19 years old) from each household were randomly selected to participate in interviews that were conducted in the respondents' homes using a computer-assisted data entry system. The adolescent and parent were interviewed at the same time, but in different rooms of the residence. The teenager self-administered the risk behavior questionnaire by listening with headphones to tape recorded items and self-entering responses into the computer. These methods minimized problems with missing data, securing respondent confidentiality, and the respondents' reading comprehension skills. The response rate was 51%, in part owing to the necessity of obtaining consent from two persons per household, and the difficulty in scheduling two in-home interviews to be conducted simultaneously.

Measures

Basic demographic information was collected from adolescent respondents: age, race/ethnicity, and gender; and from parent respondents: income, family structure, and parent education. Other measures focused on two general areas: a) attitudes and beliefs, and b) youth sexual activity. These data were obtained from the adolescents. The attitudes and beliefs, about sexual activity were grouped into three areas. Premarital Sexual Attitudes (PSA), Peer Influence (PI), and Family Communication about Sexual Relationships and Sexuality (FCS). All the items that comprise the PSA, PI scales as well as the item "most adults who are important to me think I should not have sex while I'm a teenager" of the FCS scale, were provided by the authors of the Prevention Minimum Evaluation Data Set (Brindis, Peterson, Card, & Eisen, 1998). However, in the case of absence of items in the current literature related to a specific construct of interest, original items were created (such as the rest of the items of the FCS scale), pilot tested, and revised by the research team. A description of the scales can be found in Table 1. The sexual activity "Sexual Experience" was assessed by the question "Have you ever had sexual intercourse ('done it', 'had sex', 'made love', 'gone all the way')?" Youth responded either "yes" or "no" to the item (Brindis). One can argue that a youth can be sexually experienced without having sexual intercourse, either through masturbation or oral sex. However, one has to keep in mind that this study is part of a larger study with a focus on teen-pregnancy prevention, and thus with a focus on sexual intercourse. Secondly, it is common to operationalize this construct in this way, as other researchers have done so in national studies (Flanigan et al., 2005).

Table 1

Scale description

	Item	Response
Premarital Sexual Attitudes (PSA)	Which of the following statements best describes how you feel about sexual intercourse before marriage?	Okay even if couple is not in love. Okay as long as couple is in love. Okay, but only if the couple is planning to get married. Really not okay.
Peer Influence (PI)	Having sex while I'm a teenager would just be doing what everyone else is doing. Many of my friends have already had sexual intercourse.	Strongly agree/Agree Disagree/Strongly disagree ^a Strongly agree/Agree Disagree/Strongly disagree ^a
Family Communication Sex (FCS)	Most adults who are important to me think I should not have sex while I'm a teenager. My parents and I have talked about what is right and wrong in sexual behavior. Have you talked to your parents about delaying your sexual activity? Have you talked to your parents about birth control? Have you talked to your parents about preventing sexually transmitted diseases?	Strongly agree/Agree Disagree/Strongly disagree ^a Almost always/Usually Some of the time/Almost never ^b Yes/No Yes/No Yes/No

^aThese items were dichotomized into strongly agree or agree versus disagree or strongly disagree. ^bThis item was dichotomized into almost always or usually versus some of the time or almost never.

Statistical Analysis

The analyses in this study included a sample size of 1,253 observations. Youth were not included in the analyses due to one or more of the following reasons: missing demographic information ($n = 49$), race/ethnicity other than those listed in the results ($n = 20$), and/or missing response on sexual intercourse question ($n = 32$). The sample size varied by number of youth who responded to a particular question (ranging from $n = 1141$ for PI: Many friends sexually active to $n = 1250$ for FCS: Birth control).

All statistical analyses were performed with SPSS for Windows, Release 10.0 or Microsoft Excel (SPSS, 1999). An alpha of 0.05 was used to determine statistical significance. To generate p-values and adjusted odds ratios, logistic regression, including the variables age, gender, race/ethnicity, parental education and income, family structure, and sexual

experience, was used to determine if differences in attitudes and beliefs were associated with sexual experience while taking into consideration the demographic characteristics. Potential two-way interactions between the demographic variables and sexual experience were assessed in each logistic regression. In order to decrease the risk of Type I error, the alpha level was set at 0.01 to evaluate the interactions. Items with significant interactions were reanalyzed stratifying by one of the variables involved in the interaction.

Results*Descriptive Information*

Youth mean age was 15.4 (+1.7) years and 52% of the sample was female. The youth sample racial/ethnic

Table 2

Percents by Sexual Experience for Items Related to Premarital Sexual Attitudes, Peer Influence, and Family Communication about Sexual Relationships and Sexuality

	Inexperienced	Experienced	Adjusted OR ^a (95% CI)	p-value
Premarital Sexual Attitudes (PSA)				
PSA: Sexual intercourse before marriage (It is really not okay)				
It is really not okay (Referent Group)	64	28	---	---
Okay, but only if the couple is planning to get married	17	17	2.64 (1.79, 3.88)	<0.001
Okay as long as couple is in love	16	35	5.98 (4.20, 8.51)	<0.001
Okay even if couple is not in love	4	21	15.44 (9.28, 25.71)	<0.001
Peer Influence (PI)				
Everyone else is having sex (Strongly agree/Agree)	29	35	1.34, (1.01, 1.78)	0.041
Many friends sexually active (Strongly agree/Agree)	46	89	6.62, (4.70, 9.33)	<0.001
Family Communication about Sexual Relationships and Sexuality (FCS)				
Adult role models support abstinence (Strongly agree/Agree)	90	85	0.63, (0.43, 0.94)	0.022
Right and wrong in sexual behavior (Usually/Almost always)	64	59	0.70, (0.54, 0.92)	0.009
Delaying sexual activity (Yes)	54	50	0.72, (0.55, 0.93)	0.013
Birth control (Yes)	36	59	Interaction	
STD prevention (Yes)	55	67	1.55, (1.20, 2.02)	0.001

^aAdjusted for youth age, race, and gender, parental income and education, and family structure.

characteristics were: 49% White, 23% Black, 19% Hispanic, and 10% Native American. Approximately 48% of the youth lived in two-parent households, 66% lived in households with reported income levels of less than \$35,000, and 13% of the youths' parents had not graduated from high school. Among the 1,253 youth 469 (37.4%) were sexually experienced.

Attitudes Toward Premarital Sex

The percentages and adjusted odds ratios for attitudes and behaviors by sexual experience are reported in Table 2. Potential differences were examined based on sexual experience and significant differences in attitudes about intercourse before marriage were found based on sexual experience. Sexually inexperienced youth reported more conservative attitudes than sexually experienced youth about sex before marriage. Using the response "It is really

"not okay" as the reference group, the odds ratios (OR) increased from 2.64 to 5.98 to 15.44 as responses changed from okay if couple is planning on getting married, okay if the couple is in love, to okay even if couple is not in love. This means the odds of having the attitudinal belief that it is okay for couple to have sex before marriage even if they are not in love (in contrast to the response it is not okay) is 15 times higher for sexually experienced youth compared to sexually inexperienced youth.

Peer Influence

Sexually experienced youth were significantly more likely to report the belief that everyone else was having sex, adjusted OR = 1.34, compared to youth who were not sexually experienced. Sexually experienced youth were also significantly more likely, adjusted OR = 6.62, to report that

Table 3

Adjusted Youth Age Specific Odds ratios (OR) with 95% Confidence Intervals (CI) from Individual Multiple Logistic Regression Models for Sexual Experience on FCS: Birth Control (yes)

Sexual experience	Adjusted ^a		
Age group	N	OR	95% CI
13-14 years old	444	1.29	(0.73, 2.31)
15-17 years old	636	2.28*	(1.62, 3.19)
18-19 years old	170	6.77*	(3.02, 15.19)

^aAdjusted for youth gender and race/ethnicity, parental education and income and family structure.

*p.> 0.05

many of their friends were sexually experienced as compared to youth who were not sexually experienced.

Family Communication about Sexual Relationships and Sexuality

Table 2 shows adjusted odds ratios for the family communication question by sexual experience. Sexually inexperienced youth were significantly more likely to report adult role models who support abstinence, to report communicating about right and wrong sexual behaviors, and to report talking about delaying sexual activity as compared to youth who were sexually experienced. There was a significant interaction between sexual experience and age. The analysis was stratified by age and is shown in Table 3. For youth who were 15-17 or 18-19 years of age, sexually experienced youth were significantly more likely to report discussing birth control use with their parents than sexually inexperienced youth. On the other hand, for youth ages 13-14 years old, there was no significant difference between experienced and inexperienced youth regarding discussing birth control use with their parents. Finally, parental discussions of STD prevention were significantly associated with sexual experience. Sexually experienced youth reported talking with their parents about STD prevention more commonly than sexually inexperienced youth.

Discussion

The main hypotheses tested in this study were: 1) More sexually inexperienced youth than experienced youth will likely have cautious attitudes toward premarital sex; 2) More sexually experienced youth than non-experienced youth will likely believe that their peers are sexually active; and 3) There are differences in the percentage of youth who communicate with their parents about sexual matters based on the status of the youth's sexual experience and the content of the discussion.

The results supported our first hypothesis. More sexually inexperienced youth reported cautious attitudes toward premarital sex (i.e. having sexual intercourse before marriage is really not O.K.) than did sexually experienced youth. This finding is partially supported by the literature. One study (Flanigan et al., 2005) found similar results whereas another study (Martin et al., 2003), found that only 37% of the youth sample indicated disapproval of premarital sex. The discrepancy in the results can be attributed to the characteristics of the samples used. For instance in this study the participants' ages ranged from 13-19 whereas in the other study (Martin et al., 2003) the participants' ages ranged from 14-17. Another reason for this discrepancy might be the different measures used. For instance in this study, we've used items like "it is O.K to have sexual intercourse before marriage, but only if the couple is planning to get married" whereas in the other study a representative item was " I believe it is wrong to engage in sexual intercourse before marriage" (D. Martin, personal communication, March 22, 2006).

Nevertheless, our results suggest that youth's attitudes toward sexual intercourse line up closely with their behavior (Flanigan et al., 2005). One has to keep in mind though that changing attitudes and their underlying deep-seated values might not be a feasible thing to do within the context of a health promotion program (Green & Kreuter, 1999). However, existing attitudes toward premarital sex can be taken into account in the planning of teen-pregnancy prevention related messages, services and programs provided to youth (Green & Kreuter, 1999). Youth with different histories of sexual experience may have different learning needs and different concerns and questions regarding sexuality education. For instance, experienced youth who are thinking of continuing to have sex, may benefit more from sexuality education addressing contraception than would inexperienced youth. Unfortunately, 40% of sex education instructors nationwide emphasize the ineffectiveness of contraception methods or do not teach about contraception at all (Landry, Darroch, Singh & Higgins, 2003).

More sexually experienced youth were likely to report that many of their friends had already been sexually active and that everyone else was having sex than sexually inexperienced youth. The findings are supportive of our second hypothesis, and in agreement with other studies (Nahom et al., 2001). As teens develop their identity and personality, and as their peer groups become increasingly important to them, it makes sense that they may perceive their peers to be like them, and that they may act in ways similar to their peers (Nahom et al., 2001). Consequently, if youth would communicate with each other honestly about what is really happening this might change the teens' perception regarding this matter and eventually affect their behavior. For example, the belief that one's friend has not initiated sexual intercourse or has a favorable attitude toward adolescents not having sex, has been found to be important in the delay of initiation of sexual intercourse (Miller et al., 1997) or never having had sex (DiIorio et al., 2001).

It is important to note that it is not just peers that have an influence on sexual behavior but also it is the degree of closeness to or connectedness with particular peers that determine whether peer norms affect the teenagers' decision-making process (Kirby, 2001b). If a group has clear norms for (or against) sexual activity or contraceptive use, the adolescents associated with this group will be more (or less) likely to have sex or use contraception. However, the impact of the group's norms will be greater if the adolescents are closely connected to the group than if they are not. Thus, more research should explore not only the role of peer influence in the decision-making process regarding sexual behavior, but also the role of social connectedness and its interaction with the social norms.

There were differences among youth based on their status of sexual experience regarding their communication with their parents on sexual matters. This finding renders our third hypothesis valid. Specifically, more experienced youth reported that they have discussed STD prevention with their parents than non-experienced youth. On the other hand, more virgins have reported discussions with their parents about what is right or wrong regarding sexual behavior and delaying sexual activity than sexually experienced youth. These findings are consistent with the current literature (Suellentrop, 2006). At the same time, these results are somewhat of a concern since most youth are at risk of unprotected sex and pregnancy and therefore, *all* teens need appropriate education about how to protect themselves from contracting STDs, as well as accurate information about contraception (Kirby, 2001a).

One unexpected finding was that younger teens (13-14 years old), regardless of their sexual experience status were less likely to report that they have discussed with their parents about birth control use than the older teens. One would expect that more sexually experienced younger youth would report discussing birth control use with their parents than the virgins and that there were no differences between older and younger sexually experienced teens regarding this issue. This finding is alarming considering that one in five teens in the U.S. have sex by the age of 14, contraceptive use among young teens is relatively low (Albert, Brown, & Flanigan, 2003), and early sexual activity has been associated with increased risk of both teen pregnancy (Kirby, 2001a) and contracting STDs (Miller, Cain, Rogers, Gribble, & Turner, 1999). One possible explanation for this finding is that parents are unaware of the fact that their children may already be sexually active (Albert et al., 2003). In general, parents talk a moderate amount with their children (12-14 years old) about sex even though their children don't always remember having those conversations (Albert et al., 2003). Despite the fact that nine out of ten parents agree it is important that they talk to their children about sexual issues, they also admit that they don't know how to approach the subject of sexuality education (Albert, 2004).

The results of this study reinforce the importance of sexuality education within the context of the family. Parents can decide when and how to communicate with the children

on sexual matters, based on their specific life circumstances, the personality and level of maturity of their child, as well as the parents' values (Jaccard, Dittus, & Gordon, 1996). It is important to note that parent-child communication about sexual issues may not be sufficient in reducing early sexual activity (Albert et al., 2003), as research has shown that the overall closeness between parents and teens is also important (Blum, 2002).

Limitations

Due to the sensitive nature of the topic (sexuality), youth may have provided socially desirable responses to the questions despite the measures taken to reduce the response bias which are described in detailed elsewhere (Oman et al., 2002). A second limitation concerns the moderate response rate which raises questions about the generalizability of the results. However, no significant differences were found when the racial/ethnic and household income results from the sample were compared by zip codes to census data from the same neighborhoods, suggesting that the sample was representative of the intended population. A third limitation concerns the absence of measurement on whether the reported sexual intercourse was forced vs. voluntary. Although we acknowledge the importance of this aspect, examining the issue of sexual abuse was beyond the scope of this study. Finally, as with all cross-sectional studies these findings do not imply causality.

Conclusion

These results supported the notion that sexually inexperienced youth have more cautious attitudes toward premarital sex than experienced youth; that sexually experienced youth are more likely than virgins to believe that their peers are sexually active; and that older, sexually experienced youth are more likely to have communicated with their parents about sexual matters than are virgins.

Therefore, in the development of related health promotion programs, it may be useful to health educators to consider these differences and incorporate behavioral goals, teaching methods and educational materials that are appropriate to the sexual experience of the youth (Kirby, 2000). In addition, for health educators, knowing that younger youth do not differ in their reported communication with their parents about sex regardless of their sexual experience status can help improve the timing of information provided to these youth as well as encourage parents to begin discussions with their children about sexual behavioral expectations at an earlier age. Finally, concerned policy-makers need to be aware and understand the realities of sexual activity among young people in order to better guide and support school and community efforts that are undertaken to prevent premature sexual activity among youth, and ultimately reduce unintended teen pregnancies.

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